Health Care Financing

RESEARCH BRIEF

These brief reports from the Office of Research, Office of Research and Demonstrations, provide Medicare and Medicaid program information on current health care issues.

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Research Brief No. 88-4
Use and cost of home health agency
services under Medicare:
Selected calendar years 1974-86

Use and cost of home health agency services under Medicare: Selected calendar years 1974-86

In this Research Brief, we present data on the use and cost of Medicare home health agency (HHA) services rendered to aged and disabled beneficiaries. Changes in these statistics for the period 1974-86 are examined. The use and cost of HHA services are measured by the number of persons served, number of visits, and amounts of visit charges and reimbursements. The data are classified by factors affecting changes in Medicare HHA reimbursements (Table 1); trend data for selected calendar years 1974 through 1986 (Table 2); area of residence (Table 3); age, sex, and Medicare status (Table 4); type of visit for 1974 and 1986 (Table 5); type of visit and agency (Table 6); and the 10 leading principal diagnoses (Table 7).

In 1966, Congress established the Medicare HHA benefit to provide less expensive, follow-on care as an alternative to short-stay hospital acute care. The HHA benefit covers services that include intermittent, part-time skilled nursing care; physical, occupational, or speech therapy; part-time home health aide services; medical social services; medical supplies; and durable medical equipment. To be eligible for the HHA benefit:

- The Medicare enrollee must be confined to the home and must have a plan of treatment developed by the attending physician.
- The plan of treatment must include intermittent, part-time skilled nursing care, and physical or speech therapy.
- The HHA services must be provided by an agency certified to participate in the Medicare program.

HHA benefit payments continue to represent only a small proportion (3.6 percent) of all Medicare expenditures. However, among the health services covered by Medicare, reimbursements for HHA services have shown a rapid rate of increase in the period covered by this report. Two significant pieces of legislation have influenced the rate of growth in the HHA industry.

The first of these laws, implemented on July 1, 1981, was the Omnibus Reconciliation Act (ORA) of 1980 (Public Law 96-499). This legislation, in effect, promoted the use of the HHA benefit by (1) removing the limit on the number of HHA visits, (2) eliminating the 3-day prior hospital stay under Part A, (3) eliminating the deductible for HHA services under Part B, and (4) permitting proprietary HHA's to operate in States not having licensure laws.

The potential use of HHA services was further enhanced by the implementation of the 1983 Amendments to the Social Security Act (Public Law 98-21) on October 1 of that year. This landmark legislation provided for a prospective payment system (PPS) to replace the former retrospective system used for reimbursing short-stay hospitals for the care received by Medicare beneficiaries. Under PPS, the financial interest of the hospital is best served by sending patients home or to another institutional setting as soon as possible. The data show that:

- From 1974 through 1986, Medicare expenditures for HHA benefits increased from $141 million to $1.8 billion, an average annual rate of growth (AARG) of 24 percent. However, in the years prior to the initiation of PPS (1974-83), the AARG for expenditures was 29 percent.

- During the post-PPS (1983-86) period, an 8.7 percent AARG was experienced by HHA's. The lower rate of growth can probably be attributed to a return to a normal rate of growth following the passage of ORA in 1980 and to a decline in the number of HHA visits per person.

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Selected data highlights

Table 1 - Changes in factors affecting Medicare reimbursements for home health agency (HHA) services and average annual rate of growth, by factor: Calendar years 1974, 1983, and 1986

Using the data in Table 1, we can determine the contribution of each of the factors that account for the rise in HHA visit reimbursements from 1974 to 1983 and from 1983 to 1986. Total visit reimbursements in a given year can be represented by the equation:

Total visit reimbursements $R = (E) \times (PS/E) \times (V/PS) \times (R/V)$, where:

R is the total Medicare visit reimbursements, derived by taking the ratio of visit charges to total charges and multiplying that ratio by the total HHA reimbursements.
E is the total Medicare enrollment on July 1 of each year.
PS/E is the number of persons served per 1,000 enrollees.
V/PS is the average number of HHA visits per person served.
R/V is the average reimbursement per HHA visit.

The AARG in visit reimbursements is equal to the sum of the AARG's of the terms on the right side of the above equation. The ratio of each of the individual terms on the right to its sum is the proportion of the increase in total visit reimbursements contributed by the individual factor. This procedure incorporates an interaction term that represents the combined effect of the known factors acting together. The interaction term is distributed in proportion to the value of the individual factors (Klarman, 1970).

The percent contribution of the individual factors accounting for the increase in Medicare HHA total visit reimbursements from 1974 to 1983 and from 1983 to 1986 are shown below:

	1974-83		1983-86	
Factors	AARG	Percent	AARG	Percent
Total HHA visit reimbursements	29.5	100.0	8.6	100.0
Medicare enrollment on July 1	2.6	8.9	1.9	22.6
Persons served per 1,000 enrollees	13.1	44.4	3.9	45.2
HHA visits per person served	3.5	11.9	-4.5	-52.3
Average reimbursement per visit	10.3	34.8	7.3	84.5

From 1974 through 1983, the increase in persons served per 1,000 enrollees and the number of visits per person served, coupled with the increase in Medicare enrollment, accounted for almost two-thirds of the increase in the amount of reimbursements for HHA visits. Thus, the rapid rise in the number of HHA visits during this period provided the main impetus for the increased reimbursements. From 1983 through 1986, the rise in the amount reimbursed per HHA visit more than offset the reduction in the average number of visits per person served and a moderate rate of increase in the number of persons receiving HHA services (i.e., the decrease in the number of visits per 1,000 enrollees).

Table 1

Changes in factors affecting Medicare reimbursements for home health agency services and average annual rate of growth, by factor: Calendar years 1974, 1983, and 1986

Factor	1974	1983	1986	Average annual rate of growth 1974-86	1974-83	1983-86
Charges						
Total HHA charges (000)	$147,499	$1,657,024	$2,190,238	25.2	30.8	9.7
Total visit charges (000)	$137,406	$1,596,989	$2,102,253	25.5	31.3	9.6
Ratio of visit to total charges	0.932	0.964	0.960	NA	NA	NA
Reimbursements and visits						
Total HHA reimbursements (000)	$141,464	$1,398,092	$1,795,820	23.6	29.0	8.7
HHA visit reimbursements (000) 1/	$131,844	$1,347,761	$1,723,987	23.9	29.5	8.6
HHA visits (000)	8,070	36,844	38,359	13.9	18.4	1.4
Reimbursement per HHA visit	$16.34	$36.58	$44.94	8.8	9.4	7.1
Enrollment and use						
Medicare enrollment (000)	24,201	30,026	31,750	2.3	2.4	1.9
Persons served	392,700	1,351,200	1,600,200	12.4	14.7	5.8
Persons served per 1,000 enrollees	16.2	45.0	50.4	9.9	12.0	3.9
Visits per person served	20.6	27.3	24.0	1.3	3.2	-4.3

1/ Estimated by applying the ratio of visit charges to total charges to total HHA reimbursements.

NOTE: HHA is home health agency. NA is not applicable.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the Division of Program Studies.

Table 2 - Trends in the use and cost of Medicare home health agency services, by year of service and average annual rate of growth: Selected calendar years 1974-86

The data measure changes in the use of HHA benefits for the years (1980-83) prior to the start of PPS and for a similar period of time (1983-86) following the implementation of PPS. The number of persons served using HHA benefits increased from 957,400 in 1980 to 1,351,200 in 1983, an AARG of 12.2 percent; the comparable figure for 1983-86 was only 5.8 percent. Similarly, persons served per 1,000 enrollees increased from 34 in 1980 to 45 in 1983, an AARG of 9.8 percent. During the 1983-86 period, the AARG was only 3.9 percent. HHA visits rose at an AARG of 18.0 percent in the 1980-83 period compared with a rise of only 1.4 percent in the 1983-86 period. The AARG increased in the pre-PPS period for both visits per person served (5.5 percent) and visits per 1,000 enrollees (15.9 percent) but fell during the PPS period (-4.3 percent and -0.5 percent, respectively).

The increase in the use of HHA services has been less in the period after the introduction of the PPS than in the period prior to PPS. However, because the data are not broken down according to whether the patient was hospitalized or not, the information does indicate whether the decrease in HHA use in the PPS years resulted from post-hospital or nonhospital care. Thus, it is difficult to determine what, if any, effect PPS had on HHA use.

The slower rate of growth in the use of Medicare HHA services following the implementation of PPS may reflect a variety of possible causes:

- The sharp decline in the discharge rate from short-stay hospitals in the PPS period.
- The return to a normal rate of growth in the HHA industry following the 1980-83 acceleration in growth caused by ORA of 1980.
- The competing growth in HHA use outside the Medicare sector, for example, Medicaid and private pay sectors (Report to Congress, 1987).

Table 3 - Medicare home health agency services, persons served, visits, visit charges, and reimbursements, by area of residence: Calendar year 1986

The greatest use of HHA services was in the Northeast and South Regions. The Northeast Region had the highest number of persons served per 1,000 enrollees (60) and the second highest number of visits per 1,000 enrollees (1,486). Similarly, the South Region recorded the second highest number of persons served per 1,000 enrollees (52) and the highest number of visits per 1,000 enrollees (1,489). These two regions, together, accounted for 61 percent (975,000) of all persons served (1.6 million) and 68 percent (26.2 million) of all HHA visits (38.4 million).

The South Region had the highest visit charges per person served ($1,542), about 17 percent higher than the national average ($1,317). This increase was the result of a substantially high number of visits per person served (28.5) and a visit charge per visit ($54) that was just below the national average ($55). On the other hand, the North

Table 2

Trends in the use and cost of Medicare home health agency services, by year of service and average annual rate of growth: Selected calendar years 1974-86

Year of service and AARG	Persons served		Visits			Total charges amount in thousands	Visit charges				Reimbursements		
	Number in thousands	Per 1,000 enrollees	Number in thousands	Per person served	Per 1,000 enrollees		Amount in thousands	Per visit	Per person served	Per enrollee	Amount in thousands	Per person served	Per enrollee
1974	392.7	16	8,070	21	340	$147,499	$137,406	$17	$350	$6	$141,464	$360	$6
1976	588.7	23	13,335	23	520	312,325	292,697	22	497	11	289,851	492	11
1978	769.7	28	17,345	23	639	500,747	474,498	27	617	18	435,322	566	16
1980	957.4	34	22,428	23	788	770,703	734,718	33	767	26	662,133	692	23
1982	1,171.9	40	30,787	26	1,044	1,296,454	1,232,684	40	1,052	42	1,104,715	943	37
1983	1,351.2	45	36,844	27	1,227	1,657,024	1,596,989	43	1,182	53	1,398,092	1,035	47
1984	1,515.9	50	40,337	27	1,324	1,982,033	1,843,706	46	1,216	61	1,666,253	1,099	55
1985	1,588.6	51	39,742	25	1,279	2,124,312	2,040,697	51	1,285	66	1,773,048	1,116	57
1986	1,600.2	50	38,359	24	1,208	2,190,238	2,102,253	55	1,314	66	1,795,820	1,122	57
Average annual rate of growth													
1980-83	12.2	9.8	18.0	5.5	15.9	29.1	29.5	9.2	15.5	26.8	28.3	14.4	26.9
1983-86	5.8	3.9	1.4	-4.3	-0.5	9.7	9.6	8.6	3.6	7.6	8.7	2.7	6.6

NOTE: AARG is average annual rate of growth.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the Division of Program Studies.

Table 3

Medicare home health agency services,
persons served, visits, visit charges, and reimbursements, by area of residence: Calendar year 1986

Area of residence	Persons served		Visits			Visit charges					Reimbursements	
	Number in thousands	Per 1,000 enrollees	Number in thousands	Total per person served	Per 1,000 enrollees	Charges in thousands	Amount in thousands	Per visit	Per person served	Per enrollee	Amount in thousands	Per enrollee
All areas	1,600	50.4	38,359	24.0	1,208	$2,190,238	$2,102,253	$55	$1,314	$66	$1,795,820	$57
United States	1,581	50.9	38,014	24.0	1,223	2,167,298	2,081,721	$55	1,317	67	1,779,788	57
Northeast	426	59.7	10,601	24.9	1,486	564,281	552,266	52	1,296	77	465,879	65
North Central	353	44.3	7,014	19.9	882	387,349	376,821	54	1,069	47	324,332	41
South	549	52.3	15,624	28.5	1,489	895,841	846,795	54	1,542	81	714,526	68
West	253	46.1	4,775	18.9	870	319,827	305,839	64	1,208	56	275,051	50
New England	108	59.9	2,675	24.8	1,486	116,090	113,226	42	1,050	63	44,890	58
Connecticut	28	62.4	783	28.3	1,766	33,958	33,746	43	1,220	76	31,479	71
Maine	7	43.3	143	19.2	833	5,915	5,648	39	758	33	5,330	31
Massachusetts	51	61.2	1,235	24.2	1,479	53,462	52,080	42	1,019	62	45,622	55
New Hampshire	7	42.0	145	20.0	841	5,840	5,741	40	794	33	5,524	32
Rhode Island	9	60.1	252	27.6	1,656	12,861	12,026	48	1,317	79	11,929	78
Vermont	5	74.9	117	22.2	1,663	4,056	3,983	34	756	57	3,812	54
Middle Atlantic	318	59.7	7,926	24.9	1,486	448,191	439,041	55	1,379	82	582	68
New Jersey	55	53.3	1,263	22.8	1,215	63,353	62,375	49	1,127	60	59,788	58
New York	121	49.5	2,868	23.7	1,173	180,964	177,057	62	1,462	72	142,811	58
Pennsylvania	142	76.7	3,795	26.7	2,052	203,873	199,608	53	1,406	108	159,585	86
East North Central	251	46.2	4,953	19.7	911	277,457	269,922	54	1,075	50	7,481	43
Illinois	76	51.9	1,532	20.2	1,048	94,499	91,492	60	1,207	63	74,585	51
Indiana	25	34.6	505	20.6	711	25,287	24,120	48	982	34	22,199	31
Michigan	58	50.6	1,147	19.7	997	69,812	68,347	60	1,174	59	57,123	50
Ohio	64	44.5	1,202	18.8	836	62,518	61,235	51	956	43	55,449	39
Wisconsin	29	42.4	567	19.9	842	25,342	24,728	44	866	37	22,866	34
West North Central	101	40.3	2,061	20.3	819	109,892	106,899	52	1,054	42	14,139	37
Iowa	13	28.4	213	17.0	484	8,023	7,825	37	625	18	7,295	17
Kansas	11	31.6	206	18.8	593	11,057	10,760	52	982	31	8,798	25
Minnesota	13	23.7	215	16.3	385	10,674	10,404	48	788	19	9,754	18
Missouri	51	68.5	1,188	23.3	1,595	67,777	66,494	56	1,304	89	54,662	73
Nebraska	8	36.9	155	18.3	674	8,218	7,398	48	874	32	7,860	34
North Dakota	3	29.1	48	17.4	507	2,431	2,350	49	858	25	2,145	23
South Dakota	3	23.9	38	15.0	358	1,714	1,668	44	666	16	1,597	15

See footnote at end of table.

Table 3 - Continued

Medicare home health agency services,
persons served, visits, visit charges, and reimbursements, by area of residence: Calendar year 1986

Area of residence	Persons served		Visits			Visit charges					Reimbursements	
	Number in thousands	Per 1,000 enrollees	Number in thousands	Total per person served	Per 1,000 enrollees	Charges in thousands	Amount in thousands	Per visit	Per person served	Per enrollee	Amount in thousands	Per enrollee
South Atlantic	276	50.0	7,209	26.1	1,305	404,379	384,141	53	1,390	70	177,866	61
Delaware	4	56.5	147	32.9	1,859	5,840	5,615	38	1,258	71	5,507	70
Dist. of Columbia	4	51.0	92	22.8	1,162	5,502	5,430	59	1,353	69	4,621	59
Florida	121	58.3	3,147	26.1	1,522	186,886	181,417	58	1,504	88	145,981	71
Georgia	27	40.9	848	31.1	1,269	55,556	50,910	60	1,864	76	43,986	66
Maryland	27	54.3	649	24.2	1,316	36,205	34,850	54	1,301	71	30,809	62
North Carolina	35	43.6	855	24.6	1,072	41,681	37,310	44	1,072	47	38,957	49
South Carolina	20	50.1	485	24.7	1,236	23,767	22,348	46	1,136	57	22,567	57
Virginia	28	42.3	739	26.8	1,134	35,847	34,320	46	1,246	53	33,924	52
West Virginia	11	38.0	246	22.1	840	13,096	11,942	49	1,074	41	11,295	39
East South Central	128	63.0	4,820	37.6	2,369	263,333	246,397	51	1,922	121	15,329	103
Alabama	31	57.1	1,083	34.9	1,993	55,899	53,367	49	1,721	98	44,890	83
Kentucky	22	44.8	548	24.4	1,092	28,886	24,918	46	1,108	50	24,047	48
Mississippi	28	81.3	1,231	43.4	3,532	64,251	59,057	48	2,083	169	49,080	141
Tennessee	46	72.3	1,958	42.2	3,053	114,297	109,054	56	2,353	170	91,209	142
West South Central	145	49.2	3,596	24.9	1,225	228,129	216,256	60	1,496	74	31,479	57
Arkansas	14	38.9	349	24.1	937	20,875	20,079	58	1,386	54	14,139	38
Louisiana	29	58.4	921	31.9	1,866	57,247	52,980	58	1,837	107	43,509	88
Oklahoma	18	41.2	300	17.1	703	19,342	18,647	62	1,062	44	15,363	36
Texas	84	50.9	2,026	24.2	1,233	130,665	124,550	61	1,489	76	94,642	58
Mountain	50	35.2	1,067	21.4	753	60,471	57,921	54	1,161	41	5,507	37
Arizona	9	20.8	138	15.6	323	8,765	8,148	59	920	19	7,481	18
Colorado	14	44.0	297	21.5	946	17,782	17,492	59	1,268	56	15,329	49
Idaho	5	41.6	95	19.0	790	5,150	4,595	48	919	38	4,765	40
Montana	4	41.4	104	23.2	961	4,705	4,586	44	1,026	42	4,331	40
Nevada	4	36.8	85	21.7	800	5,305	5,136	60	1,311	48	4,609	43
New Mexico	6	38.5	114	19.0	733	6,726	6,340	55	1,054	41	5,920	38
Utah	6	45.9	206	32.0	1,469	10,551	10,204	50	1,586	73	8,818	63
Wyoming	1	30.4	28	20.1	611	1,488	1,420	51	1,016	31	1,233	27
Pacific	203	49.9	3,709	18.2	911	259,355	247,918	67	1,220	61	4,621	55
Alaska	(2/)	20.9	9	21.7	454	697	693	80	1,743	36	582	31
California	159	52.7	2,840	17.9	943	206,399	196,530	69	1,237	65	177,866	59
Hawaii	3	27.4	52	17.8	486	3,710	3,556	68	1,208	33	3,089	29
Oregon	17	43.5	331	19.8	862	20,787	20,138	61	1,206	52	16,003	42
Washington	24	44.2	477	19.6	866	27,762	27,001	57	1,109	49	25,024	45
Outlying areas (1/)	19	47.1	345	17.9	842	22,939	20,532	60	1,066	50	16,032	39

1/ Includes Puerto Rico and other outlying areas.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the Division of Program Studies.

Central Region had the lowest visit charges per person ($1,069), about 23 percent below the national average. This decrease reflected a very low number of visits per person served (19.9) and a visit charge per visit ($54) that was just below the national average.

Table 4 - Medicare home health agency services, persons served, visits, charges, and reimbursements, by age, sex, and Medicare status: Calendar year 1986

The number of aged persons receiving HHA services increased in each successive age group. The rate of persons served per 1,000 enrollees rose from 25.9 for persons 65-66 years of age to 96.7 for those 85 years or over, an increase of 273 percent. There was a similar rise in the number of visits per 1,000 enrollees from 578 for those 65-66 years of age to 2,352 for persons 85 years or over, an increase of 307 percent. In contrast, visits per person and reimbursements per person increased only slightly with age.

For persons served per 1,000 enrollees, the proportion of females using HHA services (56) was 29 percent higher than the proportion of males (43). Females had one-third more visits per 1,000 enrollees than did males (1,353 and 1,011, respectively). By sex, visits per person served were nearly the same.

The proportion of aged persons using HHA services per 1,000 enrollees (52) was about 51 percent higher than for the disabled (34). In contrast, the disabled had a 21 percent higher average of visits per person served than did aged persons (29 versus 24).

Table 5 - Medicare home health agency services, number, percent, and average annual percent increase, by charges, visits, and type of visit: Calendar years 1974 and 1986

There has been a substantial change in the distribution of visits and charges by type of HHA visit. Visits of health aides and physical therapists increased from 33 percent of all visits to 45 percent of all visits in the 1974-86 period. There was a similar shift in the proportion of visit charges by type of HHA visit. On the other hand, there was a corresponding relative decrease in the use of nursing care visits during the 1974-86 period. The proportion of nursing care visits to all visits dropped from 65 percent in 1974 to 51 percent in 1986. Similarly, the proportion of nursing care visit charges dropped from 66 percent in 1974 to 55 percent in 1986.

Average visit charges per visit for physical therapy increased from $20 in 1974 to $60 in 1986; other types of visits increased in similar amounts (Figure 1).

Table 6 - Medicare home health agency services, type of agency, by use, charges, and type of visit or charge: Calendar year 1986

There have been substantial changes in the types of HHA's serving Medicare enrollees. A comparison of the number of HHA visits in 1980 (unpublished) with those in 1986 indicates that proprietary agencies had the fastest rate of growth. Visits by health care personnel from proprietary HHA's increased nearly 7 times, from 1.6 million in 1980 to 10.9 million in 1986. ORA of 1980, which permitted

certification of HHA's not having State licensure laws, contributed to this rapid increase. By 1986, the staffs of proprietary HHA's were visiting more Medicare beneficiaries than were the staffs of any other type of HHA.

Of the hospital-based HHA's, the number of persons receiving Medicare services rose from 190,000 in 1983 to 351,000 in 1986, an increase of 85 percent. Similarly, the number of visits by hospital-based HHA personnel rose from 4.4 million visits in 1983 to 7.0 million in 1986, an increase of 59 percent. It appears that the implementation of the Medicare PPS provided the impetus for short-stay hospitals to supply direct access to post-hospital, sub-acute HHA care.

Among the persons receiving HHA services, about 91 percent (1.5 million) received nursing care services and 39 percent (624,000) received home health aide services. Nursing care visits (19.4 million) accounted for about one-half of all HHA visits and home health aide visits (12.7 million) accounted for approximately one-third of all HHA visits. A similar visit pattern was shown for each type of agency.

The average visit charge per person served was $1,706 for proprietary agencies. These agencies had the highest number of visits per person served (28.8) and an above average visit charge per visit ($59). Government agencies had the lowest average visit charge per person served ($917), reflecting a low number of visits per person served (21.5) and the lowest visit charge per visit ($43).

Table 7 - Use and cost of the 10 leading principal diagnoses for Medicare home health agency beneficiaries, by the ICD-9-CM principal diagnosis and code: Calendar year 1986

The ten leading principal diagnoses for persons using HHA services accounted for 25 percent of all persons using HHA services and 26 percent of both total charges and reimbursements.

The most frequent principal diagnosis of all persons using HHA services was acute, ill-defined cerebrovascular disease (5.7 percent). Other circulatory system diagnoses related to heart disease were congestive heart failure (4.8 percent) and acute myocardial infarction-unspecified site (1.3 percent). Fracture-unspecified of neck of femur, closed (another common condition) accounted for 2.5 percent of all persons served. Persons with cardiovascular and orthopedic conditions probably used HHA services following a hospital stay.

Table 4

Medicare home health agency services,
persons served, visits, charges, and reimbursements, by age, sex, and Medicare status: Calendar year 1986

Age, sex, and Medicare status	Persons served		Visits			Visit charges					Reimbursements		
	Number in thousands	Per 1,000 enrollees	Number in thousands	Per person served	Per 1,000 enrollees	Total charges in thousands	Amount in thousands	Per visit	Per person served	Per enrollee	Amount in thousands	Per person served	Per enrollee
Total	1,600	50.4	38,359	24.0	1,208	$2,190,238	$2,102,253	$55	$1,314	$66	$1,795,820	$1,122	$57
Age													
Under age 65 years	102	34.4	2,905	28.6	982	169,611	158,816	55	1,562	54	136,932	1,347	46
65-66 years	102	25.9	2,279	22.3	578	132,105	126,946	56	1,242	32	107,902	1,056	27
67-68 years	94	26.7	2,154	22.8	609	124,041	119,603	56	1,266	34	101,605	1,075	29
69-70 years	109	32.9	2,512	23.0	757	145,041	139,544	56	1,277	42	118,794	1,087	36
71-72 years	125	40.1	2,939	23.5	939	168,655	162,754	55	1,299	52	138,069	1,102	44
73-74 years	133	47.5	3,147	23.7	1,124	179,501	173,131	55	1,301	62	147,769	1,111	53
75-79 years	350	62.9	8,324	23.8	1,493	473,123	456,208	55	1,302	82	388,811	1,110	70
80-84 years	301	84.4	7,202	24.0	2,023	409,340	394,139	55	1,311	111	336,169	1,119	94
85 years or over	283	96.7	6,896	24.3	2,352	388,821	371,112	54	1,310	127	319,769	1,128	109
Sex													
Male	579	43.2	13,548	23.4	1,011	780,831	745,178	55	1,286	56	637,327	1,100	48
Female	1,021	55.7	24,811	24.3	1,353	1,409,406	1,357,075	55	1,329	74	1,158,493	1,135	63
Medicare status													
Aged	1,499	52.0	35,454	23.7	1,231	2,020,626	1,943,437	55	1,297	68	1,658,888	1,107	58
Disabled	102	34.4	2,905	28.6	982	169,611	158,816	55	1,562	54	136,932	1,347	46

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the Division of Program Studies.

Table 5

Medicare home health agency services, number, percent, and average annual percent increase, by charges, visits, and type of visit: Calendar years 1974 and 1986

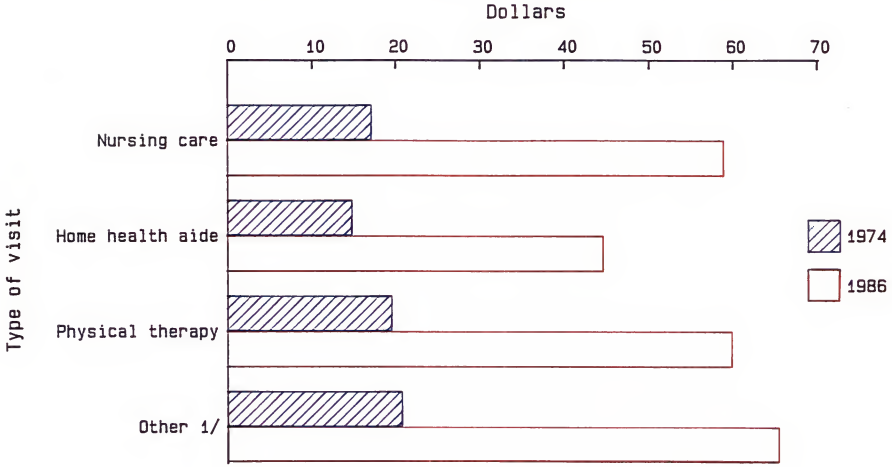
Charges, visits, and type of visit	1974 Number or amount	1974 Percent	1986 Number or amount	1986 Percent	Average annual percent increase 1974-86
Visits charges in thousands	$137,406	100.0	$2,102,253	100.0	25.5
Nursing care	89,989	65.5	1,146,225	54.5	23.6
Home health aide	28,187	20.5	570,302	27.1	28.5
Physical therapy	15,439	11.2	278,492	13.2	27.3
Other 1/	3,790	2.8	107,186	5.1	32.1
Visits in thousands	8,070	100.0	38,359	100.0	13.9
Nursing care	5,217	64.6	19,395	50.6	11.6
Home health aide	1,888	23.4	12,713	33.1	17.2
Physical therapy	784	9.7	4,631	12.1	16.0
Other 1/	181	2.2	1,629	4.2	20.1
Average visit charge per visit	$17.03	NA	$54.80	NA	10.2
Nursing care	17.25	NA	59.10	NA	10.8
Home health aide	14.93	NA	44.86	NA	9.6
Physical therapy	19.69	NA	60.14	NA	9.8
Other 1/	20.94	NA	65.80	NA	10.0

1/ Includes speech or occupational therapy, medical social services, and other health disciplines.

NA = not applicable.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the Division of Program Studies.

Figure 1
Medicare home health agency average visit charge per visit, by type of visit: 1974 and 1986



1/ Includes speech or occupational therapy, medical social services, and other health disciplines.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Division of Program Studies.

Table 6

Medicare home health agency services, type of agency, by use, charges, and type of visit or charge: Calendar year 1986

Use, charges, and type of visit or charge	All agencies	Type of agency: Visiting nurse association	Combined government and voluntary	Government	Hospital-based	Proprietary	Private nonprofit	Other 1/
Persons served in thousands								
Total 2/	1,600	411	13	177	351	379	242	27
Nursing care	1,463	379	12	165	319	344	219	24
Home health aide	624	154	4	62	122	176	95	11
Physical therapy	470	128	3	39	103	118	70	9
Other 3/	285	87	1	15	64	71	42	5
Percent of persons served								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nursing care	91.4	92.3	92.6	93.5	90.8	90.6	90.4	91.0
Home health aide	39.0	37.3	30.6	35.4	34.7	46.3	39.4	39.9
Physical therapy	29.4	31.0	25.9	22.3	29.4	31.0	28.7	34.0
Other 3/	17.8	21.1	8.6	8.6	18.3	18.7	17.3	18.8
Visits in thousands								
Total	38,359	9,686	262	3,802	7,048	10,932	6,052	576
Nursing care	19,395	5,000	141	1,927	3,718	5,302	3,019	288
Home health aide	12,713	2,994	76	1,405	2,051	3,975	2,035	176
Physical therapy	4,631	1,199	37	352	929	1,272	759	83
Other 3/	1,629	492	9	117	354	384	245	28
Percent of visits								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nursing care	50.6	51.6	53.6	50.7	52.8	48.5	49.9	50.0
Home health aide	33.1	30.9	28.9	37.0	29.1	36.4	33.6	30.6
Physical therapy	12.1	12.4	14.1	9.3	13.2	11.6	12.5	14.5
Other 3/	4.2	5.1	3.4	3.1	5.0	3.5	4.0	4.9
Visit charges in thousands								
Total	$2,102,253	$485,380	$12,298	$161,910	$425,767	$647,259	$333,944	$35,695
Nursing care	1,146,225	275,882	7,372	92,710	238,092	334,994	178,389	18,786
Home health aide	570,302	111,793	2,637	46,451	101,510	203,971	94,544	9,396
Physical therapy	278,492	66,865	1,863	16,644	60,778	81,481	45,375	5,487
Other 3/	107,186	30,825	426	6,099	25,375	26,805	15,631	2,025

See footnotes at end of table.

Table 6--Continued

Medicare home health agency services, type of agency, by use, charges, and type of visit or charge: Calendar year 1986

Use, charges, and type of visit or charge	All agencies	Type of agency: Visiting nurse association	Combined government and voluntary	Government	Hospital-based	Proprietary	Private nonprofit	Other 1/
Percent of visit charges								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Nursing care	54.5	56.8	59.9	57.3	55.9	51.8	53.4	52.6
Home health aide	27.1	23.0	21.4	28.7	23.8	31.5	28.3	26.3
Physical therapy	13.2	13.8	15.1	10.3	14.3	12.6	13.6	15.4
Other 3/	5.1	6.4	3.5	3.8	6.0	4.1	4.7	5.7
Average number of visits per person served								
Total	24.0	23.6	19.7	21.5	20.1	28.8	25.0	21.5
Nursing care	13.3	13.2	11.4	11.7	11.7	15.4	13.8	11.8
Home health aide	20.4	19.5	18.6	22.5	16.8	22.6	21.3	16.5
Physical therapy	9.9	9.4	10.7	8.9	9.0	10.8	10.9	9.1
Other 3/	5.7	5.7	7.8	7.7	5.5	5.4	5.8	5.7
Average visit charge per visit								
Total	$55	$50	$47	$43	$60	$59	$55	$62
Nursing care	59	55	52	48	64	63	59	65
Home health aide	45	37	35	33	50	51	46	53
Physical therapy	60	56	51	47	65	64	60	66
Other 3/	66	63	48	52	72	70	64	71
Average visit charge per person served								
Total	$1,314	$1,181	$925	$917	$1,214	$1,706	$1,379	$1,332
Nursing care	784	727	599	561	747	974	814	770
Home health aide	914	728	648	744	833	1,161	991	879
Physical therapy	593	524	542	423	589	692	653	601
Other 3/	376	355	374	402	396	377	373	403

1/ Includes rehabilitation and skilled nursing facility-based agencies.
2/ Detail does not add to total because persons may receive more than one type of service.
3/ Includes speech or occupational therapy, medical social services, and other health disciplines.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the Division of Program Studies.

Table 7

Use and cost of the 10 leading principal diagnoses for Medicare home health agency beneficiaries, by the ICD-9-CM principal diagnosis and code: Calendar year 1986

ICD-9-CM principal diagnosis	ICD-9-CM code	Persons served	Total charges: Amount in thousands	Total charges: Per person served	Reimbursements: Amount in thousands	Reimbursements: Per person served
All diagnoses 1/	---	1,589,202	$2,170,118	$1,365	$1,778,767	$1,119
10 leading diagnoses	---	396,402	573,422	1,446	471,048	1,188
Acute, ill-defined cerebrovascular disease	436	90,217	176,136	1,952	144,746	1,604
Congestive heart failure	428.0	76,110	94,259	1,238	77,103	1,013
Fracture-unspecified of neck of femur, closed	820.8	39,617	52,506	1,325	43,662	1,102
Chronic airway obstruction, not classified	496	36,567	43,993	1,203	36,575	1,000
Essential hypertension-unspecified	401.9	34,420	42,461	1,233	34,065	989
Diabetes mellitus-adult or unspecified type	250.00	29,655	38,703	1,305	32,558	1,097
Pneumonia, organism unspecified	486	25,020	28,444	1,136	23,319	932
Bronchus and lung, unspecified	162.9	23,580	23,011	975	19,065	808
Acute myocardial infarction-unspecified site	410.9	21,277	21,989	1,033	17,895	841
Incontinence of urine	788.3	19,937	51,915	2,603	42,055	2,109
All other diagnoses, excluding the 10 leading diagnoses	---	1,192,800	1,596,695	1,338	1,307,718	1,096

1/ Excludes diagnosis unknown.

NOTE: ICD-9-CM = International Classification of Diseases, Ninth Revision, Clinical Modification.

SOURCE: Health Care Financing Administration, Office of Research and Demonstrations: Data from the Division of Program Studies.

References

Health Care Financing Administration: Report to Congress: Impact of the Medicare Hospital Prospective Payment System, 1985 Annual Report. HCFA Pub. No. 03251. Office of Research and Demonstrations. Washington. U.S. Government Printing Office, Aug. 1987.

Klarman, H. E., Rice, D. P., Cooper, B. S., and Stettler, H. L.: Source of Increase in Selected Medical Care Expenditures, 1929-1969. Staff Paper No. 4. Social Security Administration, Office of Research and Statistics, Apr. 1970.

Sources and limitations of data

Data published in this report were obtained from billing forms submitted by HHA's for Medicare beneficiaries receiving reimbursable services in 1986. These figures are estimates based on a 40-percent sample of the enrolled population and are subject to sampling variability. The sample counts have been inflated by a factor of 2.5 to give an estimate of the utilization of HHA services for 1986.

It is estimated that approximately 95 percent of the bills received for home health services in 1986 were included in this report. Therefore, the visit and reimbursement figures should be viewed as an approximation of the magnitude of differences rather than final measures of use.

Payments shown are based on interim rates that are adjusted after the end of the HHA accounting year, according to reasonable costs of operation. Retroactive reimbursements are excluded from the data in these tables. Beginning on July 1, 1979, limits were placed on the amounts Medicare would pay for HHA visits. These limits are established for each type of visit and are revised each year.

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Research Brief releases

The following Health Care Financing Research Briefs are available on request from the Office of Research and Demonstrations, Office of Research, Division of Program Studies, Medicare Program Studies Branch:

- No. 85 - 1 Medicare: Inpatient Use of Short-Stay Hospitals, 1983.
- No. 85 - 2 Hospital Outpatient Services Under Medicare: Trends and Demographic Variations, 1983.
- No. 85 - 3 Medicare: Use and Charges for Inpatient Services in Short-Stay Hospitals, by Diagnosis-Related Groups, Calendar Years 1981 and 1984.
- No. 85 - 4 Medicare: Surgical Procedures in Short-Stay Hospitals, by Census Region, 1983.
- No. 86 - 1 Medicare: Use and Cost of Home Health Agency Services, 1983.
- No. 86 - 2 Medicare: Participating Providers and Suppliers of Health Services, December 1985.
- No. 86 - 3 Raising the Age of Eligibility for Medicare to Age 67.
- No. 86- 4 Medicare: Use of Skilled Nursing Facilities, 1984.
- No. 87 - 1 Medicare: Inpatient Use of Short-Stay Hospital Services by Beneficiaries With a Diagnosis of Diabetes Mellitus, 1984.
- No. 87 - 2 Medicare: Use of Specialty Hospitals, 1985.
- No. 87 - 3 Medicare: Deductible and Coinsurance Amounts Incurred by Beneficiaries Discharged from Short-Stay Hospitals, 1983-84.
- No. 87 - 4 Medicare: Use and Cost of Hospital Outpatient Services, 1985.
- No. 87 - 5 Medicaid: Use and Cost of Services, Fiscal Year 1985.
- No. 88 - 1 Use and Cost of Short-Stay Hospital Inpatient Services Under Medicare: Calendar Year 1985.
- No. 88 - 2 Medicare: Use and cost of short-stay hospital services under Medicare as related to future policy and benefit reform: Calendar year 1985.
- No. 88 - 3 Medicare participating providers and suppliers of health services: December 1987.

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